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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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07/586,334 09/21/90 SCHIMMEL

P MITS261

EXAMINER

YARBROUGH, A

ART UNIT

PAPER NUMBER

1807

DATE MAILED: 11/20/92

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 7/30/92 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892.        | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                   |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.             | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____  |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1 And 3-19 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.

3. ☐ Claims \_\_\_\_\_ are allowed.

4. ☒ Claims 1 And 3-19 are rejected.

5. ☐ Claims \_\_\_\_\_ are objected to.

6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on \_\_\_\_\_, has been ☐ approved. ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☒ been received. ☐ not been received.  
☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

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Applicant's arguments filed July 30, 1992 have been fully considered but they are not deemed to be persuasive.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1 and 3-19 are rejected under 35 U.S.C. § 103 as being unpatentable over Park et al in view of Endo et al and Badger et al as set forth in previous Office action.

Park et al. disclose the method of locating the site of a major function, aminoacylation with alanine, and shows by mutation at this location that the location G<sup>3</sup>. U<sup>70</sup> is critical to the function. They have also determined the three dimensional location of this site: in the acceptor helix. They have determined that the compound alanyl-tRNA synthetase effects this region. Note page 2741.

Endo et al. describe a compound that inactivates ribosomes

by hydrolyzing a single phosphodiester bond on the 3' side of G-4325 in eukaryotic 28S rRNA. They have also determined the three-dimensional structure surrounding the targeted site. Note p. 2216. Endo et al. disclose the delivery of the drug to the rRNA in a buffered solution.

Badger et al. describe using x-ray crystallography to study the three-dimensional structure of rhinovirus and the structure of drug-resistant mutants. It suggest also that seeing the structure of the mutant may permit designs of drugs that could inhibit the drug. Note pages 163 and 164.

Therefore, in view of the above, it would have been obvious for one of ordinary skill in the art to determine the site of the desired function and the effect of mutations as shown in all three references, and to determined the three-dimensional structure of and around the targeted site as shown by Badger et al. Park et al. disclose the critical site for tRNA as the G3:U70 base pair and in the acceptor helix. Since the site is the same as that recited in claims 14-19 of the instant application, it would be obvious that it has the same structure. Applicant has just named the region differently. All of the references are directed to finding the three-dimensional structure of the targeted site and Badger et al teach designing drugs for a site based on this structure; no criticality is seen in that site being in a minor groove of a RNA. Further, since the structure

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of RNA has not been shown to be in a regular spiral like DNA, it has not been shown that the critical site would always be in a minor groove.

The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to teach how to make and/or use the invention, i.e. failing to provide an enabling disclosure.

Applicant's examples read like a review of what others have done rather than a teaching of how to make and/or use the instant invention. The declaration submitted under 37 C.F.R. 1.132, gives applicant's opinion that one skilled in the art would know how to determine the critical site of a function, to determine minor grooves, and how to design drugs. However, these processes are essential to the invention and must be given in the specification. These essential procedures can not be given by reference to non-U.S. patent literature.

The incorporation of essential material by reference to a foreign application or foreign patent or to a publication inserted in the specification is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or applicant's attorney or

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agent, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. *In re Hawkins*, 486 F.2d 569, 179 USPQ 157; *In re Hawkins*, 486 F.2d 579, 179 USPQ 163; *In re Hawkins*, 486 F.2d 577, 179 USPQ 167.

Claims 1 and 3-19 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Papers related to this application may be submitted to Group 180 by facsimile transmission. Papers should be faxed to Group 180 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Fax Center number is (703) 308-4227.

Yarbrough/sg  
November 16, 1992

AMELIA BURGESS YARBROUGH  
PRIMARY EXAMINER  
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